

In the claims

The following amendments are made with respect to the claims in the International application PCT/GB2004/004093.

This listing of claims will replace all prior versions and listings of claims in this application.

1 (original). An ophthalmic device which comprises a holographic element comprising a medium and, disposed therein, a hologram, wherein an optical characteristic of the element changes as a result of a variation of a physical property of the medium, and wherein the variation arises as a result of interaction between the medium and an analyte present in an ocular fluid.

2 (currently amended). ~~[[A]]~~ The device according to claim 1, wherein the medium is polymeric.

3 (currently amended). ~~[[A]]~~ The device according to claim 2, wherein the medium is obtainable by the polymerization of monomers including acrylamide.

4 (currently amended). ~~[[A]]~~ The device according to ~~any preceding claim 1~~, wherein the holographic element does not contain silver.

5 (currently amended). ~~[[A]]~~ The device according to ~~any preceding claim 1~~, wherein the interaction is a chemical reaction.

6 (currently amended). ~~[[A]]~~ The device according to claim 5, wherein the reaction is reversible.

7 (currently amended). ~~[[A]]~~ The device according to ~~any preceding claim 1~~, wherein the analyte is glucose.

8 (currently amended). ~~[[A]]~~ The device according to claim 7, wherein the medium comprises a phenylboronic acid group.

9 (currently amended). ~~[[A]]~~ The device according to claim 8, wherein the medium is obtainable by the polymerization of monomers including 3-acrylamidophenylboronic acid or 5-fluoro-2-methacrylamidophenylboronic acid.

10 (currently amended). ~~[[A]]~~ The device according to claim 8 ~~or claim 9~~, wherein the medium comprises a group which is capable of repelling lactate, the group comprising a substantial negative charge.

11 (currently amended). ~~[[A]]~~ The device according to claim 10, wherein the boron atom of the boronic acid group carries the substantial negative charge.

12 (currently amended). ~~[[A]]~~ The device according to claim 10 ~~or claim 11~~, wherein the medium is formed by the polymerization of monomers including acrylamidoglycolic acid.

13 (currently amended). ~~[[A]]~~ The device according to ~~any of claims 7 to 12~~ claim 7, wherein the medium comprises an amine group.

14 (currently amended). ~~[[A]]~~ The device according to ~~any preceding claim 1~~, which is a contact lens.

15 (currently amended). ~~[[A]]~~ The device according to ~~any of claims 1 to 13~~ claim 1, which is implantable.

16 (currently amended). A method of detection of an analyte in an ocular fluid, ~~[[which]]~~ wherein said method comprises detecting ~~[[any]]~~ a change of the optical characteristic of the holographic element of ~~a device according to any of claims 1 to 15 with the fluid, in the eye~~ an ophthalmic device that comprises a holographic element comprising a medium and, disposed therein, a hologram, wherein an optical characteristic of the element changes as a result of a variation of a physical property of the medium, and wherein the variation arises as a result of interaction between the medium and an analyte present in an ocular fluid.

17 (currently amended). A method for the production of ~~a device according to claim~~
14 an ophthalmic device that comprises a holographic element comprising a medium and,
disposed therein, a hologram, wherein an optical characteristic of the element changes as a
result of a variation of a physical property of the medium, and wherein the variation arises as
a result of interaction between the medium and an analyte present in an ocular fluid,

[[which]] wherein said method comprises contacting the holographic element with a
contact lens, wherein the contacted regions of the element and the lens are cross-linkable; and
cross-linking said regions.